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ABSTRACT

To examine whether a person's actions are more important in determining impressions of personality than are self-descriptions, subjects in two separate studies viewed two videotapes, one depicting a stimulus person's self-description and the other depicting that person's behavior in a conversation. Subjects rated the stimulus person on several personality dimensions related to introversion-extraversion and made attributions about the cause of the conversation behavior. A four-way factorial design--personality descriptor used in self-description (introvert or extravert) X type of behavior in conversation X order of presentation of videotapes X stimulus person--found that behavioral evidence had more of an impact on personality ratings than did self-description. Subjects attributed the stimulus person's behavior to personality when the self-descriptor agreed with the behavior, but attributed more causality to situational factors in inconsistent conditions. No order of presentation effects were found. (Author/NRB)

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When Self-Descriptions Contradict Behavior: Actions Do Speak Louder than Words

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Running head: Actions Speak Louder than Words

Abstract

Subjects viewed two videotapes, one depicting a stimulus person's self-description and the other depicting that person's behavior in a conversation, according to a four-way factorial design: personality descriptor used in the self-description ("introvert" or "extravert") x type of behavior displayed during the conversation (introverted or extraverted) x order of presentation (self-description seen first or conversation seen first) x stimulus person (one of two actresses). After viewing the stimuli, subjects rated the stimulus person on several personality dimensions related to introversion-extraversion and made attributions about the cause of her conversation behavior. Results showed a clear superiority of behavioral evidence over self-description in impact on the personality ratings. Although most of the personality dimensions showed significant effects of both the self-description and the behavior, the latter accounted for much more of the variance in these ratings. In contrast to previous findings, no order-of-presentation effects were found. Subjects tended to attribute the stimulus person's behavior to her personality in consistent conditions (where the self-descriptor agreed with the behavior), but tended to attribute more causality to situational factors in inconsistent conditions. Several differences between previous research and the current method of examining effects of inconsistent personality information are noted. The results are discussed in terms of strategies of information integration and errors in information processing.

When Self-Descriptions Contradict Behavior: Actions Do Speak Louder than Words

In making judgments about another individual's personality, we are seldom presented with perfectly consistent pieces of information. A graduate student who described himself as diligent in his letter of application might be seen spending most of his first semester relaxing in the coffee room, or a colleague who confesses to a terrible temper might appear to be remarkably self-possessed in frustrating situations. It has long been part of common wisdom that behavior is a more powerful indicator of what a person is really like than are self-descriptions. During political campaigns, candidates rely heavily on the "Actions speak louder than words" premise, pointing out contradictions between their opponent's past words and deeds; ministers remind their congregations that they must "Practice what they preach"; and parents recognize the futility of instructing their children to "Do as I say, not as I do." Although it has not coined any such pithy descriptions of the phenomenon, social psychology seems to have generally accepted the proposition that actions are the most potent indicants of personality and ability (Heider, 1958; Jones & Davis, 1965).

Despite the general acceptance of this assumption, however, social psychological research has not directly examined the presumed superiority of behavior over self-description in shaping personality impressions. Instead, most theorizing has focused on the effects of inconsistent trait information on overall impressions of stimulus persons. Asch's (1946) pioneering work on person perception and impression formation is a prime example of this approach. On the basis of his classic experiments, Asch

concluded that when perceivers are given inconsistent information on personality, they attempt to integrate all components of the information into a unified impression. He suggested that the first few pieces of information provide perceivers with a "set." If inconsistent information follows, the perceivers look for shades of meaning in the inconsistent terms that render them more compatible with the earlier items. Thus, Asch's early work and the many studies that built upon it (e.g., Cohen, 1961; Gollin, 1954; Haire & Grunes, 1950; Kelley, 1950) suggested two major theoretical propositions: first, that perceivers do attempt to form unified impressions, even when faced with contradictory information; and second, that initial information may lead to a "change of meaning" of later inconsistent information.

A number of theoreticians since Asch (e.g., Anderson, 1965; Anderson & Jacobson, 1965; Wyer, 1968) have suggested a more strictly mathematical model of information integration. This weighted-average model of trait combination proposes that traits are individually assigned values according to their valence, their importance to the perceiver, and their relevance to the judgment being made; these values are then averaged together into a final impression. According to this model, traits that are inconsistent with the general impression are given a lower weighting in the final combination.

A third major theoretical treatment of personality judgment based on inconsistent information derives from attribution theory (Heider, 1958; Jones & Davis, 1965; Kelley, 1967, 1973). Attribution theorists have been less concerned with the combination of large numbers of personality descriptors into an overall impression and more concerned with the cognitive strategies employed when perceivers confront two distinctly contradictory

pieces of information about a stimulus person. This attributional approach examines both trait-words and behaviors as stimuli and focuses on the causal attributions perceivers make about the inconsistencies they observe. Although the main body of attribution research suggests that perceivers tend to view behaviors as caused by underlying personality dispositions (Jones & Nisbett, 1971; Ross, 1977; Snyder & Jones, 1974), it has been proposed (Hayden & Mischel, 1976) that if behaviors are extremely inconsistent with previously formed impressions, they may not be seen as reflecting stable dispositions, but may be dismissed as uninformative or as caused by situational factors.

Although no research within these theoretical traditions has directly examined contradictions between self-description and behavior, they do suggest hypotheses about the personality judgments made under such circumstances: (1) overall, behavior should carry more weight in the final impression (Heider, 1958; Jones & Nisbett, 1971; Ross, 1977; Snyder & Jones, 1974); (2) if a bit of behavior contradicts a previous self-description (or vice versa), it should be integrated somehow into the overall impression unless, perhaps, the inconsistency is extreme (Asch, 1946; Anderson, 1965; Hayden & Mischel, 1976); (3) in the overall integration, the piece of information that is given the least weight should be that which is seen as inconsistent with a larger body of evidence, all other factors (valence, importance to the perceiver, and so on) being equal (Anderson, 1965; Anderson & Jacobson, 1965; Wyer, 1968). Each of these hypotheses is addressed in the present research.

Despite the lack of direct evidence in these theoretical traditions on the relative importance of self-description and behavior for personality impressions, several studies provide empirical evidence that is indirectly

relevent to this question.[1] For example, it appears that the order in which the pieces of contradictory information are presented may be as important a determinant of impressions as the actual informational content. Most research on inconsistency in personality information has examined such order effects. The earliest work, carried out by Asch (1946), seemed to give strong evidence of a primacy effect. When trait-words were presented in a good-to-bad order, the final impression was more favorable than when they were presented in a bad-to-good order. The first group of studies designed specifically to examine primacy and recency effects (Luchins, 1957) presented subjects with narrative paragraphs about the stimulus person, who was described in one paragraph as an introvert and in the other as an extravert. The final impressions of subjects who read only one paragraph were compared with those of subjects who read both, in either the introverted-extraverted order or the extraverted-introverted order. A strong primacy effect was found, an effect that has been replicated a number of times (cf. Jones & Goethals, 1971).

Subsequent work on order effects has shown several factors to be important in determining the strength of the primacy effect, however, and it is possible, under some circumstances, to eliminate it or to produce a recency effect. Anderson (1974) has interpreted the main body of evidence in the order-of-information studies as supporting an attention decrement explanation. He argues that primacy effects are normally obtained because of a passive decrement in attention over the several bits of information; if the attention decrement can be countered, the primacy effect should disappear. This suggests that order of presentation might be one important factor in determining the relative effects of self-description and behavior, but that it might only have a significant influence if attention decrements

are possible.

Few studies have departed from the tradition of focusing on order effects under conditions that present subjects with inconsistent trait-word information. In one (Hayden & Mischel, 1976), subjects first read paragraphs describing aggressive or submissive behaviors of a stimulus person and then read cartoons that depicted the stimulus person behaving either aggressively or submissively. They then made attributions about the causes of the stimulus person's behavior in the cartoon. The results suggested that subjects may adopt two strategies in dealing with inconsistent information: they may attribute inconsistent behaviors to situational factors, or they may revise their overall personality impressions so that the behaviors can actually be viewed as consistent. Another study (Bryan & Walbek, 1970) presented a person's own words in direct contradiction to her actions. Results suggested that, when children viewed a videotaped model who practiced either generosity or selfishness and preached either generosity or selfishness, the model's actual behavior was more important in determining children's impressions. Ratings of her attractiveness were dependent only upon her acts, and her acts had a marginally significant effect upon the children's later altruistic behavior.

There is, then, a substantial body of social psychological research on the judgments perceivers make when presented with inconsistent information. However, there are several dimensions along which the present research differs from previous work. In the present study, subjects were given counterbalanced presentations of self-descriptive and behavioral information concerning a stimulus person's personality in order to determine the relative impact of these two types of information on subjects' impressions of her personality and their attributions for her behavior. Personality impressions

and attributions formed when the two pieces of information were inconsistent were compared to those formed when the two were consistent. The most important differences between this and previous research can be grouped into three categories: the stimuli used, the source of the information given, and the types of inconsistent information provided.

Most previous research on the effects of inconsistent information on impression formation has used relatively sterile stimuli, the most common type of stimulus being the trait-adjective list(Anderson, 1965; Asch, 1946; Hendrick & Constantini, 1970; Stewart, 1965). Occasionally, subjects have been given narrative paragraphs describing the stimulus person (Hayden & Mischel, 1976; Luchins, 1957; Rosenkrantz & Crockett, 1965). Only a small number of studies have used more vivid stimuli such as cartoon drawings (Hayden & Mischel, 1976), motion pictures (Collin, 1954), or videotapes (Bugental, Kaswan & Love, 1970 ; Reeder & Fulks, 1980). In some instances, however, the personality information conveyed by these stimuli has not been adequately assessed prior to their use. In addition, almost all of the previous research on inconsistency has used stimuli that are strongly evaluatively valenced--e.g., friendliness, warmth, or intelligence. In contrast to previously-used stimuli, those in the present research were vivid (videotapes) and were exhaustively tested to determine precisely what personality information they conveyed. Moreover, since the crucial dimension of personality judgment used here--introversion-extraversion--is not strongly evaluatively valenced (Anderson, 1968), it should allow the present work to importantly extend previous results.[2]

Except for a few studies in which the stimulus person himself or herself appears on a motion picture film or videotape (Gollin, 1954; Bugental, Kaswan, & Love, 1970; Reeder & Fulks, 1980), most previous inconsistency

studies leave the source of the information unspecified (e.g., Anderson, 1965; Asch, 1946; Haire & Grunes, 1950; Hayden & Mischel, 1976; Hendrick & Constantini, 1970). By making the stimulus person the source of the information, the present study attempted to increase the salience of the inconsistency and to force subjects to confront it, not allowing them the strategy of disregarding the inconsistent information as coming from a questionable source. Furthermore, this use of the stimulus person as source allows this research to more directly confront the question of whether a person's actions speak louder than her words.

The types of inconsistent information presented are also crucial here. Most previous research on inconsistency has pitted a trait description against a trait description or a behavior description against a behavior description (e.g., Anderson, 1965; Asch, 1946; Bossart & DiVesta, 1966; Hayden & Mischel, 1976). In contrast, the present research presents subjects with trait-behavior inconsistencies, a pairing that has not been used before but that seems to capture the essence of many real-world confrontations with inconsistency. In addition, most studies use several pieces of information, occasionally making it difficult to pinpoint the locus of the inconsistency. A few studies, on the other hand, have used only one piece of information (e.g., Reeder & Fulks, 1980), such that inconsistency is not directly presented at all; conclusions about the relative strength of words and actions can then only be made by between-group comparisons. The research presented here, however, uses two--but only two--pieces of distinctly consistent or distinctly inconsistent information.

The goal of the present research was to directly examine the question of whether a person's actions are more important in determining impressions of her personality than are her self-descriptions. In addition, this research

was designed to examine the role of order effects in the formation of these impressions, the degree of integration of inconsistent information, and the causal attributions that are made for behavior that contradicts a self-description.

In Study 1, sets of videotaped stimuli were tested to determine the nature of the personality information they conveyed. The criterion here was that the self-descriptive stimulus and the behavioral stimulus convey clearly opposite or clearly identical information about the stimulus person's introversion-extraversion. In Study 2, subjects watched two clips of these stimuli, a self-descriptive monologue and an overt portrayal of conversation behavior, in counterbalanced orders. A completely crossed design was used to vary the type of self-descriptor given ("introvert" or "extravert") and the type of behavior shown (introverted or extraverted). In order to increase the generalizability of the results, two stimulus persons were used. Subjects rated the stimulus person on several personality dimensions, and also made attributions as to the causes of her behavior in the conversation.

Study 1

Method

Subjects. This study consisted of four phases. In Phases 1, 2 and 3, different subjects watched one of the videotapes to be used in Study 2; in Phase 4, subjects watched two of these videotapes. Twenty male and female Brandeis University undergraduates participated in each of Phases 1, 2, and 4, and 40 participated in Phase 3. These 100 students were recruited for a study on "personality impressions" and were paid for their participation.

Stimuli. Two graduate actresses from the theater arts department of Brandeis University were recruited to play the parts of the stimulus persons.

Each actress recorded both an "introvert" and an "extravert" self-description, as well as an introverted and an extraverted conversation.

The four self-descriptive monologues were all one minute in length ($\pm$ 5 seconds). For these monologues, the actresses' scripts were marked at several points for them to look up at the camera, such that each actress looked at the camera 14 times during each monologue. All monologue scripts were identical except for the word "introverted" or "extraverted". The basic script began with demographic information--place of birth, number of siblings, and so on. Following this, the stimulus person mentioned attitudes toward school and went on to a personality self-description. All descriptive adjectives used in the monologue were chosen to be irrelevant to the dimension of introversion-extraversion (Cantor & Mischel, 1977). At the end of the personality description, the stimulus person said, "...and I'd say that my personality is fairly (introverted) (extraverted)." She concluded the monologue with a statement about her hobbies, which were also chosen to be irrelevant to introversion-extraversion. The actresses were instructed to make their deliveries of the two different monologues as identical as possible in every respect. Thus, it was hoped that the only information conveyed by the self-descriptive monologues would be the self-descriptive statements themselves, with no cues from other sources. This, of course, was necessary so that data in Study 2 might clearly be interpreted in terms of "words" versus "actions."

All conversation tapes presented the same conversation between three young women. Since the same script was used for all conversations, the only variable introduced into these tapes was the part played by the stimulus person: she played either the introvert or the extravert. In each tape, the three women entered a room and seated themselves in a semi-circle,

expressing discomfort about being "thrown together" to get acquainted in such a short time. One character (the extravert) asked the others their names and then proceeded to describe a movie she had just seen. During this conversation, the introvert said very little, and spoke only when spoken to. The neutral character did a moderate amount of talking and occasionally initiated comments or questions. The conversation lasted approximately two minutes. After the three characters were seated, the camera moved in for a close-up of the stimulus person and remained focused on her for the remainder of the conversation. Each of the two main actresses played both the introvert and the extravert, yielding four conversation tapes. (A "bit player" played the neutral character in all tapes.) The actresses were instructed to play their parts with both their verbal and their nonverbal behavior, but to avoid overacting.

Procedure. In Phase 1, the 20 subjects viewed one of the four monologues and then completed personality ratings of the stimulus person, including ratings of shyness and outgoingness. The 20 subjects in Phase 2 viewed one of the monologues with the critical word, "introverted" or "extraverted," deleted. This was done in order to determine that the critical word was the only clue to the stimulus person's placement on the introversion-extraversion dimension. These subjects completed the same personality ratings as did those in Phase 1. The 40 subjects in Phase 3 viewed one of the four conversations and then rated the stimulus person on these personality dimensions. Finally, the 20 subjects in Phase 4 watched one of the four inconsistent pairings of monologue and conversation videotapes (e.g., stimulus person A: "introvert" monologue, extraverted conversation), in order to determine if subjects would find the personality rating task too difficult under these conditions, or if the hypotheses of the experiment would be obvious to them.

Results and Discussion

All personality ratings were made on 40-point scales. Mean ratings of the stimulus person by subjects in Phase 1, who viewed one complete monologue, indicate that they did believe her to be shy when she described herself as introverted (stimulus person A, $\underline{M}$ = 29.8; stimulus person B, $\underline{M}$ = 28.2); in addition, they rated her low on the "outgoing" variable (stimulus person A, $\underline{M}$ = 11.8; stimulus person B, $\underline{M}$ = 8.8). By contrast, subjects who heard the stimulus person describe herself as extraverted rated her low on the "shy" variable (stimulus person A, $\underline{M}$ = 16.2; stimulus person B, $\underline{M}$ = 11.8) and high on the "outgoing" variable (stimulus person A, $\underline{M}$ = 23.4; stimulus person B, $\underline{M}$ = 30.2). In addition, it appears that there were no differences in subjects' perceptions of the two stimulus persons. For both variables, the effect of the type of self-description was statistically significant: shy, $\underline{F}(1, 16) = 12.42$, $\underline{p} < .003$; outgoing, $\underline{F}(1,16) = 40.97$, $\underline{p} < .001$. Furthermore, there was no significant main effect of simulus person for either variable and no significant interaction between stimulus person and self-description.

Subjects in Phase 2 viewed one monologue with the critical descriptor, "introverted" or"extraverted" , omitted. Their personality ratings suggest that, indeed, only minimal cues concerning introversion-extraversion were present in other aspects of the monologues (nonverbal behaviors, other statements made in the monologue, paraverbal cues, etc.). Here, there were no significant main effects or interactions (all F's $<$ 1.8).

Results of Phase 3 indicate that in the conversations the introverted character is indeed seen as introverted, and the extraverted character is seen as extraverted. The former is rated high on introversion (stimulus person A, $\underline{M}$ = 32.1; stimulus person B, $\underline{M}$ = 31.0) and low on extraversion (stimulus person A, $\underline{M}$ = 4.1 ; stimulus person B, $\underline{M}$ = 6.0). The latter, by contrast,

is rated low on introversion (stimulus person A, $\underline{M}$ = 9.1; stimulus person B, $\underline{M}$ = 5.9) and high on extraversion (stimulus person A, $\underline{M}$ = 28.7; stimulus person B, $\underline{M}$ = 33.1). In addition, this effect seems to be equally strong for both stimulus persons. The main effect of conversation type (the character played by the stimulus person in the conversation) is statistically significant for both variables: introverted, $\underline{F}(1,39) = 112.69$, $\underline{p} < .001$; extraverted, $\underline{F}(1,39) = 166.37$, $\underline{p} < .001$. Neither the main effects of stimulus person nor the interactions are statistically significant.

None of the subjects in Phase 4, who viewed two inconsistent tapes, found the personality rating task impossible or even very difficult, and none expressed suspicions that the purpose of the study was to examine impressions based on inconsistent information.

Overall, then, these videotapes meet the criteria for stimuli to be used in Study 2. The monologues do convey clear information about the stimulus person's introversion or extraversion, but only through the one critical self-descriptive word. The conversations convey similarly clear information. The two actresses appear to have given equivalent performances in both the monologues and the conversations. Moreover, both sets of stimuli appear to be believable. No subject expressed any doubts that the stimulus person may not have been reading a self-description that she had written, and only a small minority (four) of the 60 subjects in Phases 3 and 4 expressed suspicions that the conversations were not spontaneous.

Study 2

Method

Subjects and design. Subjects were 160 male and female undergraduates at Brandeis University who participated in partial fulfillment of a course requirement. There were 10 subjects in each of the 16 conditions formed

by the four-way factorial design: type of self-descriptive monologue ("introverted" or "extraverted") x type of conversation behavior (introverted or extraverted) x order of presentation (monologue-conversation or conversation-monologue) x stimulus person (actress A or actress B).

Procedure. Subjects participated in small groups of three to five. Before the start of each session, subjects were shown a picture of the stimulus person; any subject who knew her was asked to leave. Subjects were told that they would watch a set of videotapes and would later be asked to give their impressions of the main person they saw on the tapes. The experimenter explained that the people on the tapes were subjects from a previous study who had been asked to come to the laboratory to participate in a variety of different tasks. According to the cover story, one of the tasks these subjects had been asked to perform was to write a short monologue about themselves. Each subject had supposedly been given ten minutes to write this self-description and was then asked to read what she had written while being taped.

The experimenter continued by stating that these subjects had returned to the laboratory at a later date and were randomly put together in groups of three. Each group had supposedly been given 1½ to 2 minutes for a getting-acquainted conversation that was not to include a discussion of their backgrounds, education, or work.[3] The experimenter explained that a hidden camera and microphone had surreptitiously recorded this conversation.

Dependent measures. The dependent measures were all obtained by questionnaires administered after subjects viewed the videotapes. These measures can be grouped into three categories: (1) Personality impressions. Subjects used continuous rating scales to rate the stimulus person on the two major personality dimensions, "shy" and "outgoing,"[4] as well as

several dimensions which have been shown to correlate with these (Cantor & Mischel, 1977): friendly, reserved, self-assured, timid, and withdrawn. In addition, several other personality items were rated, including: social competence, spontaneity, ability to relate to others, ability to adjust to new situations, and self-knowledge. (2) Attributions. Subjects were asked to use continuous rating scales to rate the extent to which they felt the stimulus person's behavior in the conversation was caused by the situation, her own personality, and the other people talking with her. (3) Use of information. Open-ended questions at the end of the questionnaire asked subjects (a) if there was anything about the two tapes that they considered especially noteworthy; (b) on what specific pieces of information from the two tapes they had based their ratings of the variables "outgoing" and "shy"; (c) which piece of information--the self-description or the conversation--they found most useful in making their ratings, and why; and (d) if they felt they had received conflicting information, what specific inconsistencies they had noticed, to what they attributed those inconsistencies, and how they resolved the contradiciton when forming their final impressions. These questions were included in order to determine whether subjects in the inconsistent conditions did indeed perceive the inconsistency between the self-description and the conversational behavior, and how they dealt with that inconsistency.

Results and Discussion

Manipulation checks. In order to determine whether the critical word in the monologues, "introverted" or "extraverted," was clearly heard by subjects, they were asked to do a free recall of statements made in the monologue after all other ratings had been made. One hundred twenty-three

of the 160 subjects (77%) mentioned the critical word or a synonym in free recall. There were no significant differences between conditions in recall of the critical word. In addition, on the open-ended questions about conflicting information, 64 of the 80 subjects in the inconsistent conditions (80%) responded that they felt there was an inconsistency between the stimulus person's extraverted/introverted behavior during the conversation and her introverted/extraverted self-description.

Personality ratings. A factor analysis of all the personality variables revealed essentially one main factor that can be labeled "extraversion-introversion." Several variables loaded high on this factor; seven loaded positively (outgoing, friendly, self-assured, social competence, spontaneity, ability to relate to others, and ability to adjust to new situations), and four loaded negatively (shy, reserved, timid, withdrawn). All of these variables correlated significantly with one another, and the correlations were all greater than $\pm$.50. Thus, a combined extraversion-introversion index was formed for each subject by summing the ratings on the seven "extraversion" variables and subtracting the ratings on the four "introversion" variables. The means, reported in Table 1, reveal, first, that both the self-descriptive monologue and the conversation had an important

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Insert Table 1 about here

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impact on the personality ratings. Subjects who viewed the "extraverted" monologue or the extraverted conversation rated the stimulus person as high on extraversion and low on introversion. Likewise, those who viewed the "introverted" monologue or the introverted conversation rated the stimulus person high on introversion and low on extraversion. Four-way analyses of variance, therefore, revealed significant main effects of the monologue,

$F(1,144) = 25.00$, $p < .001$, and of the conversation, $F(1,144) = 408.32$, $p < .001$. All other main effects and interactions were nonsignificant, with the exception of the monologue x stimulus person interaction, $F(1,144) = 3.97$, $p < .05$. This interaction suggests that for the extraverted monologue, stimulus person A was seen as somewhat more extraverted than person B; for the introverted monologue, stimulus person A was seen as somewhat more introverted than person B.

The individual variables that made up the combined index all showed similar patterns of main effects. Indeed, all variables included in the index showed significant effects of the conversation, and most (reserved, outgoing, shy, self-assured, timid, withdrawn, and social competence) showed main effects of the monologue. These effects were particularly strong for the two main personality dimensions: "outgoing" (monologue, $F(1,144) = 25.11$, $p < .001$; conversation, $F(1,144) = 277.05$, $p < .001$) and "shy" (monologue, $F(1,144) = 43.54$, $p < .001$; conversation, $F(1,144) = 332.39$, $p < .001$). Neither variable showed any main effects for order of presentation or stimulus person. For both variables, the two-way interactions were all nonsignificant, as was the four-way interaction.[5]

These personality ratings, then, provide a strikingly clear picture of what happens when self-descriptions on introversion-extraversion contradict actual introverted or extraverted behavior. Although both self-descriptions and behaviors have a significant impact on personality impressions, it appears that actions do speak louder than words. For each one of the eleven personality dimensions relevant to introversion-extraversion, and for the combined index, the effect of the conversation was stronger than the effect of the monologue. In order to assess the relative impacts of these sources of information, percents of variance accounted for by monologue and conversation were calculated for each of the variables (Hays, 1973). These values

illustrate the clear superiority of behavioral evidence over self-description in this study. For example, the conversation accounts for 60.4% of the variance in the ratings of "outgoing," and 61.7% of the variance in the ratings of "shy." By contrast, the monologue accounts for only 5.3% and 7.9% of the variance in ratings of these two variables, respectively. On the combined index, the conversation accounts for 68.4% of the variance, while the monologue accounts for only 3.6%. Over all the variables, the percent of variance accounted for by the conversation is at least five times greater than that accounted for by the monologue, and it ranges as high as 420 times greater.

It is interesting to note that no order effects were obtained on any of the personality variables, in sharp contrast to previous research (e.g., Luchins, 1957) which has consistently demonstrated primacy effects. As reported earlier, Anderson (1974) has suggested that order effects may be due to a decrement in attention over several pieces of information. According to this explanation it may be argued that, perhaps because the stimuli in this experiment were so vivid and the presentations so brief, subjects' attention did not decrease over the course of stimulus presentation as much as it might have if written stimuli had been used.

Attributions and use of information. Using three separate scales, subjects had been asked to rate the degree to which they attributed the stimulus person's behavior in the conversation to her personality, the situation of being in a getting-acquainted conversation, or the other two individuals with whom she was interacting. Most of the significant effects in these ratings appear in the personality attributions (see Table 2). In

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Insert Table 2 about here

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these attributions, there was a significant monologue x conversation interaction, $F(1,144) = 7.16$, $p < .01$. Inspection of the means for these ratings reveals a clear pattern: the stimulus person's behavior is rated as more due to her personality in consistent conditions than in inconsistent conditions. In addition, a significant main effect of monologue ($F(1,144) = 7.58$, $p < .01$) indicates that subjects seeing the introverted monologue rated personality a stronger influence on behavior than did subjects seeing the extraverted monologue. Finally, a significant monologue x conversation x stimulus person interaction, $F(1,144) = 9.72$, $p < .01$, reveals that the previously mentioned monologue x conversation interaction is only strong in ratings of stimulus person A.[6]

Attributions of behavior to the situation are in some ways complementary to the personality attributions. In these attributions, a significant monologue x conversation x stimulus person interaction, $F(1,144) = 8.64$, $p < .01$, reveals that, for stimulus person A, the inconsistent conditions are rated higher on situational influences than are the consistent conditions. This, of course, mirrors the finding that consistent conditions were rated higher on personality influences than inconsistent conditions. Unfortunately, this pattern was not obtained for stimulus person B.[7]

Subjects' attributions of the stimulus person's behavior to the other two individuals in the conversation revealed no main effects or interactions. In addition, there were no effects of order of presentation on any of the attribution variables.

It is surprising and somewhat puzzling that there were significant stimulus person effects on the attribution ratings, particularly when there were virtually no such effects on the personality ratings. However, despite these effects, a pattern does begin to emerge: the conversation behavior

is seen as due to personality when it is consistent with the self-description, but due to situational influences when it is inconsistent with the self-description. This interpretation is supported by subjects' free responses on one of the use-of-information questions. When asked (if they did see an inconsistency) to what they attributed that inconsistency, only 5% of those who did notice the inconsistency in the inconsistent conditions attributed it to the stimulus person's personality. In sharp contrast, 47% attributed the inconsistency to some aspect of the situation.

Many of the responses to the open-ended use-of-information questions support the conclusion that the conversation was more important than the self-description in the personality judgments. Of all subjects in the inconsistent conditions, 70% said that they found the conversation to be more useful to them when deciding on their ratings. When asked on what specific information from the tapes they had based their scale ratings of the variable "outgoing," 82.5% of the subjects in the inconsistent conditions mentioned information available only from the conversation. In answering the same question about their ratings of the "shy" variable, 66% mentioned only the conversation. In resolving the inconsistency, 48% of the subjects spontaneously stated that they used the conversation to a greater degree, while only 9% said they had used the monologue more. A sample of subjects' explanations for this superiority of behavioral information suggests that they felt the conversation revealed the person's true personality, while a self-description could be unreliable: "conversation is what she is really like," "conversation is not opinion," "had to be herself in conversation," "she describes the way she would like to be," "self-images can be deluding," and "self-description not always true."

Finally, two scale ratings that subjects were asked to make along with the personality ratings provide additional insight into the way they approached

their task. Subjects' ratings of their confidence in their personality judgments of the stimulus person revealed a significant monologue x conversation interaction, $F(1,144) = 17.09$, $p < .001$; subjects were much more confident of their ratings in the consistent than the inconsistent conditions. This suggests that although conversational behavior was relied upon much more heavily in personality judgments, subjects did not by any means ignore the self-descriptions. These self-descriptions not only had a significant impact on the final ratings but, when they disagreed with behavioral evidence, they caused subjects to question the validity of their personality assessments.

This same monologue x conversation interaction was found in subjects' ratings of the stimulus person's self-knowledge, $F(1,144) = 10.13$, $p < .002$; her self-knowledge was rated as much higher in the consistent than the inconsistent conditions. It seems that, when confronted with an inconsistency, subjects decided that the stimulus person did not know herself well, allowing them to place much more stock in the conversational behavior than in the possibly delusionary self-description.

General Discussion

This research suggests that, when people are confronted with an inconsistency between an individual's self-description and behavior, actions really do speak louder than words. Results from Study 2 revealed that conversational behavior accounted for a much larger percentage of the variance in all the introversion-extraversion personality variables than did self-description, and subjects' answers to open-ended questions made clear their greater reliance upon the behavior in forming judgments about the stimulus person. It is also clear, however, that the self-descriptions were not ignored; there was a significant main effect of monologue on most of the variables. In addition, the introverted monologue - introverted conversation conditions were

rated higher on introversion than were the extraverted monologue-introverted conversation conditions, while the extraverted monologue-extraverted conversation conditions were rated higher on extraversion than were the introverted monologue-extraverted conversation conditions. Thus, as Asch (1946) proposed in the earliest social-psychological work on inconsistent personality information, an integration of bits of information does occur; seldom is a bit of information ignored, even if it is blatantly contradictory.

Interestingly, the information integration in this study was not influenced by the well-documented order-of-presentation effects that previous researchers have identified. There was no evidence of any primacy or recency effects for the personality or attribution ratings. Anderson (1974) has suggested that order effects are due to attention decrements over several pieces of information; in this study, the two videotapes were such vivid stimuli and were presented in such close proximity over a brief period of time (less than five minutes) that attention decrements were quite unlikely. Since these stimuli can probably be considered closer to real-world information about personality than the written materials usually used in previous studies, the present results raise questions about the extent to which order effects would be found outside the laboratory, and the conditions under which such effects would be expected.

It could be argued that the present study was not an appropriate test of whether actions speak louder than words because the "absolute strength" of the self-descriptive and the behavioral information might not have been truly equal. However, such an argument is a weak one. The pretest subjects' judgments of the stimulus person's personality, on the basis of information obtained from only the monologue or the conversation, revealed mean scale

ratings for the two types of information that were in very close proximity. In other words, subjects who viewed only the "introvert" monologue rated the stimulus person as approximately as shy as did subjects who viewed only the "introvert" conversation. The same held true for the "extravert" monologues and conversations. Ultimately, of course, it is not possible to assess the "true" absolute strength of either piece of information. Clearly, when the two were pitted against each other the self-descriptive monologue did appear to be weaker; this, however, is precisely the phenomenon described by the phrase, "Actions speak louder than words."

In proposing mechanisms by which this phenomenon might operate, it is important to consider just how subjects in the inconsistent conditions of Study 2 went about making their personality judgments. There is some evidence from cognitive psychology (Loftus, 1979) that subjects reject blatantly contradictory information, and the inconsistency presented to subjects here can certainly be considered blatant. The failure of subjects in the present study to completely reject one of the pieces of information, however, can be explained by some clear differences between this and the previous research. Loftus (1979) presented subjects with visual information (pictures of a crime being committed) that was to be factually recalled, and afterwards presented some of those subjects with a bit of information from another source that was clearly inconsistent with what they had seen. In contrast, subjects in the current study were not asked to recall factual information in giving their personality ratings, but were asked to form impressions based on what they had seen. The tendency to completely discount inconsistent information might have been overcome because, due to the nature of the stimuli used and the judgments to be made in the present study, there were mechanisms by which that information could be integrated into the overall impression--

such as deciding that the stimulus person was responding to situational pressure. In addition, since both pieces of information in this study came from the same source--the stimulus person herself--information rejection by doubting the credibility of the source was made relatively unlikely as a mechanism of inconsistency resolution.

The present data do suggest that subjects made use of at least two mechanisms in attempting to deal with the inconsistency, two mechanisms that might have been used simultaneously. On the one hand, subjects seemed to see the inconsistency as caused by situational factors impinging upon the stimulus person during the conversation. On the other hand, they decided that the inconsistency was due to a lack of self-knowledge in the stimulus person, that her self-description was somehow biased. In essence, the first strategy involves the discounting of the behavioral information as indicative of personality and the second strategy involves the discounting of the self-descriptive information. The use of both attributional strategies in combination would seem to be less than totally rational since, in making their personality ratings, subjects behaved as if both pieces of information were to be believed to at least some extent. It may be that this logical error in the use of information arose from a general confusion that subjects in the inconsistent conditions were experiencing, a confusion that was reflected in the low levels of confidence they expressed in their personality ratings.

Although it does seem consistent with common wisdom, there are two senses in which a greater reliance on "actions" than "words" may, in some circumstances, be considered an error in processing social information. First, it can be seen as an example of the fundamental attribution error (Ross, 1977), by which perceivers tend to overestimate the role of personality

factors in causing behavior and underestimate the role of situational influences. In essence, "behavior engulfs the field" (Heider, 1958), leading perceivers to assume that actions bespeak an individual's true, enduring dispositional tendencies. It has been repeatedly demonstrated (e.g., Jones & Harris, 1967) that subjects will attribute a person's behavior to his or her personality, even when clear situational pressures were operating on that person. In the present study, information from the behavioral source carried much more weight in influencing personality ratings than did information from the self-description. Thus, even though subjects tended to attribute the inconsistency to situational influences on conversational behavior, this did not sufficiently influence their personality ratings. They still behaved as if that behavior were caused solely by personality factors.

In addition, the subjects' strong relative weighting of behavioral information over self-descriptive information can be viewed as a failure to adequately use consistency information in making their judgments. As proposed by Kelley (1967, 1973), consistency information is provided by evidence that an individual behaves in a consistent manner across time. Although it appears in a somewhat impoverished form, consistency information was provided to subjects in this study by the stimulus person's own assertion about her personality. Since introversion-extraversion is not a personality dimension with strong evaluative connotations, we might expect that subjects would take the stimulus person's statement as a credible summary of her behavior across time. Indeed, we might expect such information to be considered as more reliable than the behavioral evidence provided in a heavily constrained two-minute getting-acquainted conversation with two strangers in a psychology laboratory. It, however, was not accepted as such,

and this "consistency" information was discounted to a large extent when it contradicted behavioral evidence.

The present study suggests that, in everyday personality perception, we do form impressions on the implicit assumption that actions speak louder than words; there is even some reason to believe that ordinarily the relative preference for actions may be even more extreme than it was here. In this research, both pieces of information were brief and the evidence on introversion-extraversion was presented in a straightforward manner. Rarely in everyday encounters is information packaged so neatly, and rarely is the contradiction so blatant as it was here. If, with such a clear inconsistency between words and deeds, subjects were so willing to rely on the latter, we can speculate that with less blatant contradictions, perceivers may be even more confident in looking to behavior as an accurate reflection of the person within.

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Footnotes

[1]One recent article, "When Actions Speak Louder than Words: Implicational Schemata and the Attribution of Ability" (Reeder & Fulks, 1980) seems, on the basis of its title, to directly address the question posed here. The research presented there, however, was not designed to pit a self-description against an instance of behavior and examine subsequent personality impressions. Instead, subjects were given only a self-description or an instance of behavior and were asked to make causal attributions for high or low levels of skill presented.

[2]For example, in Anderson's (1968) ranking of 555 trait adjectives on likeableness, "intelligent" was ranked 7, "warm" was ranked 16, and "friendly" was ranked 19. In contrast, "outgoing" was ranked 171 and "shy" was ranked 256.

[3]This was used as part of the cover story to make it plausible to subjects that the conversants did not discuss anything personal in their "getting acquainted" conversation. The topic of the conversation--a recent movie--was designed to be as neutral as possible in its content.

[4]The terms "extraverted" and "introverted" were not used because these were the terms used in the monologue.

[5]There was a significant three-way interaction between monologue, conversation, and stimulus person for the variable "shy," $F(1,144) = 7.52$, $p < .01$. Inspection of the means for this variable reveals that for stimulus person A, for the extraverted conversation, the differences between the "extraverted" monologue and the "introverted" monologue are more pronounced than they are for stimulus person B. However, for both stimulus persons, the pattern of means is the same.

For the other variables included in the combined index, very few

significant interactions were obtained, and none of these revealed any patterns different from those that had been obtained for the variables "shy" and "outgoing" and the combined index.

[6]There were some other stimulus person effects on the personality attributions. A main effect of stimulus person, $F(1,144) = 7.47$, $p < .01$, indicated that, overall, person B was rated higher on personality influences than was person A. In addition, there was a significant conversation x stimulus person interaction, $F(1,144) = 4.02$, $p < .05$: for person B, the introverted conversation was rated higher on personality influences, but for person A, the extraverted conversation was rated higher.

[7]A main effect of stimulus person, $F(1,144) = 4.24$, $p < .04$, indicates that, overall, stimulus person A was rated higher on situational influences than was person B.

Table 1

Mean Ratings of the Stimulus Person

on the Combined Extraversion-Introversion Index

Study 2

	MONOLOGUE		MONOLOGUE	
	Extraverted	Introverted	Extraverted	Introverted
CONVERSATION				
Extraverted	194.10[a]	120.60	178.20	150.60
	177.80[b]	134.40	141.30	143.80
Introverted	3.70	-47.90	-3.60	-22.50
	24.40	-40.70	16.90	-39.60
	STIMULUS PERSON A		STIMULUS PERSON B	

Note. The combined index was formed by summing the extraversion personality ratings for each subject and subtracting the introversion personality ratings.

[a]The first number in each cell is the mean for those subjects who viewed the monologue first.

[b]The second number in each cell is the mean for those subjects who viewed the conversation first.

Table 2

Attributions of the Stimulus Person's Conversation Behavior to Her Personality, Study 2

	MONOLOGUE		MONOLOGUE	
	Extraverted	Introverted	Extraverted	Introverted
CONVERSATION				
Extraverted	30.4[a]	28.5	26.9	32.8
	32.3[b]	28.8	32.1	32.0
Introverted	19.3	31.4	31.5	32.4
	19.7	32.4	30.5	33.1
	STIMULUS PERSON A		STIMULUS PERSON B	

Note. These ratings were made on a 40-point scale. A higher number indicates more of the behavior attributed to personality.

[a]The first number in each cell is the mean for those subjects who viewed the monologue first.

[b]The second number in each cell is the mean for those subjects who viewed the conversation first.